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**LIST OF CLAIMS / AMENDMENTS**

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3 Please amend claims 1-6, 8-9, and 11-32 as shown herein.

4 Claims 1-32 are pending and are listed following:

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6     **1. (currently amended)**     A method, comprising:

7         receiving an input;

8         determining if the input can be processed by an optimized filter engine and,

9         if so, directing the input to the optimized filter engine for processing;

10         if the input cannot be processed by the optimized filter engine, directing the

11         input to a generalized filter engine for processing;

12         determining whether the input can be processed by a selective sub-engine

13         which supports only a subset of a query language; and

14             if the determining indicates that the input can be processed by the

15             selective sub-engine, then directing the input to the selective sub-engine

16             for processing in less time than would be required by a general sub-

17             engine which fully supports the query language;

18             if the determining indicates that the input cannot be processed by

19             the selective sub-engine, then directing the input to the general sub-

20             engine for processing; and

21         processing the input to derive a result;

22         wherein the generalized filter engine is configured to handle terms of a

23         language to which the input conforms and the optimized filter engine is configured

24         to process a subset of the terms of the language.

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1       **2. (currently amended)**     The method as recited in claim 1,

2 wherein:

3       the optimized filter engine further comprises an optimized filter sub-engine;

4       the generalized filter engine further comprises a generalized filter sub-  
5 engine; and

6       the optimized filter sub-engine selective sub-engine and the generalized  
7 filter general sub-engine are encompassed by a single filter engine.

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9       **3. (currently amended)**     The method as recited in claim 1,

10 wherein the determining step further comprises recognizing whether or not the  
11 input conforms to a grammar of the optimized filter engine selective sub-engine.

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13       **4. (currently amended)**     The method as recited in claim 1,

14 wherein the input language further comprises a query language based on  
15 eXtensible Markup Language (XML).

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1       5. (currently amended) The method as recited in claim 1,  
2 wherein the optimized filter engine is a first optimized filter engine and selective  
3 sub-engine includes a first sub-engine which supports only a first unique subset of  
4 the query language and a second sub-engine which supports only a second unique  
5 subset of the query language, and wherein the method further comprises:

6              if the input cannot be processed by the first optimized filter engine;  
7 determining if the input can be processed by a second optimized filter engine;  
8              directing the input to the second optimized filter engine if the second  
9 optimized filter engine can process the input;

10              directing the input to the generalized filter engine for processing if the  
11 second optimized filter engine cannot process the input; and

12              wherein the second optimized filter engine is configured to handle a subset  
13 of the input language, the subset of the second optimized filter engine is different  
14 than the subset of the first optimized filter engine.

15              determining whether the input can be processed by the first sub-engine or  
16 by the second sub-engine;

17                  if the determining indicates that the input can be processed by the  
18 first sub-engine, then directing the input to the first sub-engine for  
19 processing;

20                  if the determining indicates that the input can be processed by the  
21 second sub-engine, then directing the input to the second sub-engine for  
22 processing; and

1                   if the determining indicates that the input cannot be processed by  
2                   the first sub-engine, and that the input cannot be processed by the  
3                   second sub-engine, then directing the input to the general sub-engine for  
4                   processing.

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6.        **(currently amended)**      The method as recited in claim 1, further  
7 comprising:

8                   parsing the input to determine if ~~multiple-discrete different~~ sub-expressions  
9 can be identified;

10                  if the different sub-expressions are identified, determining if a first sub-  
11 expression can be processed by the optimized filter engine selective sub-engine;

12                  if the first sub-expression can be processed by the optimized filter engine  
13 selective sub-engine, then directing the first sub-expression to the optimized filter  
14 engine selective sub-engine for processing;

15                  if the first sub-expression cannot be processed by the optimized filter  
16 engine selective sub-engine, directing the first sub-expression to the optimized filter  
17 filter engine general sub-engine for processing;

18                  if a second sub-expression can be processed by the optimized filter engine  
19 selective sub-engine, directing the second sub-expression to the optimized filter  
20 engine selective sub-engine for processing; and

21                  if the second sub-expression cannot be processed by the optimized filter  
22 engine selective sub-engine, directing the second sub-expression to the optimized filter  
23 filter engine general sub-engine for processing.

1           **7. (original)** The method as recited in claim 6, further comprising:  
2           obtaining a result of the processing of the first sub-expression; and  
3           processing the second sub-expression only if the result of the first sub-  
4 expression is true.

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6           **8. (currently amended)** A filter engine, comprising:  
7           at least one optimized matcher selective sub-engine configured to accept an  
8 input and process the input against a filter table associated with the optimized  
9 matcher selective sub-engine, wherein the selective sub-engine is configured to  
10 process only a subset of terms of an input language;

11           a generalized matcher general sub-engine configured to accept an input and  
12 process the input against a filter table associated with the generalized matcher  
13 general sub-engine, wherein the general sub-engine is configured to process only  
14 all terms of the input language; and

15           an analyzer configured to determine whether the input can be processed by  
16 the optimized matcher selective sub-engine and, if so, directing the input to the  
17 optimized matcher selective sub-engine for processing or, if not, directing the  
18 input to the generalized matcher general sub-engine for processing; and

19           wherein:

20           the generalized matcher is configured to process all terms of an input  
21 language; and

22           the optimized matcher is configured to process only a subset of the terms of  
23 the input language.

1       9. **(currently amended)**     The filter engine as recited in claim 8,  
2 wherein the analyzer is further configured to analyze a new filter added to the filter  
3 engine and to determine an appropriate matcher with which to associate associate  
4 the new filter.

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6       10. **(original)**     The filter engine as recited in claim 8, wherein the  
7 input language is XPath.

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9       11. **(currently amended)**     The filter engine as recited in claim 8,  
10 wherein the analyzer is further configured to determine whether the optimized  
11 matcher selective sub-engine can process the input by comparing the input to a  
12 grammar associated with the optimized matcher selective sub-engine and  
13 determining whether the input consists of terms that are compatible with the  
14 grammar.

1           **12. (currently amended)**     The filter engine as recited in claim 8,  
2 further comprising a sub-expression module that is configured to:

3               determine whether an input the input consists of distinct different sub-  
4 expressions;

5               if the input consists of distinct different sub-expressions, directing each  
6 sub-expression of the different sub-expressions contained in the input to the  
7 analyzer; and

8               wherein the analyzer is further configured to determine whether a sub-  
9 expression each of the different sub-expressions can be processed by the optimized  
10 efficient matcher and to direct each sub-expression of the different sub-expressions  
11 to an appropriate matcher for processing.

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13           **13. (currently amended)**     The filter engine as recited in claim 12,  
14 wherein a first sub-expression may be directed to the optimized matcher selective  
15 sub-engine and a second sub-expression may be directed to the generalized  
16 matcher general sub-engine.

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18           **14. (currently amended)**     The filter engine as recited in claim 8,  
19 wherein the at least one optimized matcher selective sub-engine further comprises:

20               a first optimized matcher selective sub-engine configured to process inputs  
21 that conform to a first subset of the input language;

22               a second optimized matcher selective sub-engine configured to process  
23 inputs that conform to a second subset of the input language; and

24               wherein the first subset and the second subset are unique subsets of the  
25 input language.

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2       **15. (currently amended)**     One or more computer-readable storage  
3 media containing computer-executable instructions that, when executed on a  
4 computer, perform the following steps:

5              determining an appropriate matcher sub-engine to which an input message  
6 should be directed for processing against a set of queries;

7              processing the input message in a first filter engine selective sub-engine if  
8 the first filter engine selective sub-engine comprises a grammar that supports  
9 processing of the input message;

10             processing the input message in a second filter engine general sub-engine if  
11 the first filter engine selective sub-engine grammar does not support processing of  
12 the input message; and

13             wherein:

14             the input message is in accordance with a query language;

15             the first filter engine selective sub-engine supports a subset of the query  
16 language; and

17             the second filter engine general sub-engine supports the entire query  
18 language.

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20       **16. (currently amended)**     The one or more computer-readable  
21 storage media as recited in claim 15, further comprising the step of accepting input  
22 messages for both filter engines the selective sub-engine and the general sub-  
23 engine by way of a single input means so that an input message sending  
24 application does not have to distinguish between the first filter engine and the  
25 second filter engine the selective sub-engine and the general sub-engine.

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2       **17. (currently amended)**     The one or more computer-readable  
3     storage media as recited in claim 15, wherein the query language is XPath.  
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5       **18. (currently amended)**     The one or more computer-readable  
6     storage media as recited in claim 15, wherein the query language is an XML query  
7     language.  
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9       **19. (currently amended)**     The one or more computer-readable  
10    storage media as recited in claim 15, further comprising the steps of:  
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12              analyzing the input message prior to determining which filter-engine sub-  
13     engine will process the input message, and to determine if the input message can  
14     be parsed into two or more sub-expressions;  
15

16              for each sub-expression identified, determining an appropriate matcher sub-  
17     engine that can process the sub-expression; and  
18

19              directing each sub-expression to the appropriate matcher sub-engine for  
20     processing.  
21

22       **20. (currently amended)**     The one or more computer-readable  
23     storage media as recited in claim 19, further comprising the step of deriving a final  
24     result of the input message processing from at least one result of the sub-  
25     expression processing.  
26  
27  
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1           **21. (currently amended)**     The one or more computer-readable  
2     storage media as recited in claim 19, further comprising the steps of:

3                 determining if a first sub-expression evaluates true;

4                 proceeding with processing of subsequent sub-expressions if the first sub-  
5     expression is true; and

6                 foregoing processing of subsequent sub-expressions if the first sub-  
7     expression is false.

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9           **22. (currently amended)**     The one or more computer-readable  
10    storage media as recited in claim 15, wherein each matcher sub-engine includes a  
11    set of queries against which input messages directed to the respective matchers  
12    sub-engine are tried, and wherein each set of queries is unique.

1           **23. (currently amended)**       A message processing system,  
2 comprising:

3           means for receiving a message;  
4           an optimized filter processor or a selective sub-engine which supports only a  
5           subset of a message language;  
6           a general filter processor or a general sub-engine which supports all of the  
7           message language;

8           analyzing means for analyzing the message to determine if the optimized  
9           filter processor or selective sub-engine is configured to process the message;

10          distribution means for distributing the message to the optimized filter  
11          processor or selective sub-engine if the optimized filter processor or selective sub-  
12          engine can process the message or to the general filter processor or general sub-  
13          engine if the optimized filter processor or selective sub-engine cannot process the  
14          message.

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16          **24. (currently amended)**       The message processing system as  
17          recited in claim 23, wherein:

18          the optimized filter processor or selective sub-engine further comprises a first  
19          set of queries against which a message directed to the optimized filter processor is  
20          compared the message can be compared;

21          the general filter processor or general sub-engine further comprises a second  
22          set of queries against which a message directed to the general filter processor is  
23          compared the message can be compared; and

24          the first set of queries contains fewer queries than the second set of queries.  
25

1           **25. (currently amended)**     The message processing system as  
2 recited in claim 23, wherein:

3                 the message conforms to an XML query language;  
4                 the ~~general filter processor~~ general sub-engine is configured to support the  
5 entire XML query language; and  
6                 the ~~optimized filter processor~~ selective sub-engine is configured to support  
7 a subset of the XML query language.

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9           **26. (currently amended)**     The message processing system as  
10 recited in claim 25, wherein the XML query language is XPath.

11  
12          **27. (currently amended)**     The message processing system as  
13 recited in claim 23, wherein the ~~optimized filter processor~~ selective sub-engine  
14 further comprises means for optimizing increasing message processing ~~over the set~~  
15 ~~of queries included in the optimized filter processor~~ performance includes  
16 combining individual filters for use in a single procedure.

17  
18          **28. (currently amended)**     The message processing system as  
19 recited in claim 27, wherein the means for optimizing increasing message  
20 processing performance further comprises a hash function.

1           **29. (currently amended)**     The message processing system as  
2 recited in claim 23, wherein: ~~the optimized filter processor is a first filter processor~~  
3 ~~the selective sub-engine includes a first selective sub-engine which supports only a~~  
4 ~~first unique subset of the query language and a second selective sub-engine which~~  
5 ~~supports only a second unique subset of the query language;~~

6                 ~~the message processing system further comprises a second optimized filter~~  
7 ~~processor to which messages may be directed, the second optimized filter~~  
8 ~~processor supporting a unique subset of the query language; and~~

9                 ~~the distribution means is further configured to direct the message to the~~  
10 ~~second optimized filter processor second selective sub-engine if the first optimized~~  
11 ~~filter processor first selective sub-engine cannot process the message but the~~  
12 ~~second optimized filter processor second selective sub-engine can process the~~  
13 message.

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15           **30. (currently amended)**     The message processing system as  
16 recited in claim 23, further comprising means for parsing the message into  
17 constituent sub-expressions, and wherein the analyzing means is further configured  
18 to process individual sub-expression as an individual message and to evaluate sub-  
19 expression processing results to derive a result corresponding to the message.

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21           **31. (currently amended)**     The message processing system as  
22 recited in claim 23, wherein the message is a sub-expression of a parent message.

1       **32. (currently amended)**     The message processing system as  
2 recited in claim 23, further comprising means for determining whether a filter in  
3 the system is associated with ~~the generalized filter processor or the optimized filter~~  
4 processor the general sub-engine or with the selective sub-engine.

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